

DECLASS  
By Licensing Review  
**SECRET**

Appln. of Hartmann et al.  
USSN 08/309,343

line 34, substitute --closely-- for "cosely".

THW  
11/3/85  
19  
Page 9, line 10, substitute --structure-- for "Structure".

Page 10, line 37, insert --signal-- before "processing".

Page 16, line 21, substitute --xr-- for "zr" (first occurrence).

Page 17, line 16, substitute --input-- for "output".

Page 18, line 10, substitute --positive-- for "negative".

Page 20, line 17, substitute --pitch-- for "pich".

Page 22, line 19, substitute --smaller-- for "maller".

In the Claims:

Claim 1 (amended) A target tracking device for target tracking missiles comprising an electro-optical seeker assembly (16) mounted in a missile structure (10) through gimbals (18, 22), said seeker assembly responding to target radiation and providing target deviation signals, and actuator means (36, 38) for causing said seeker assembly (16) to track the target, said actuator means being controlled by said target deviation signals wherein:

- (a) said electro-optical seeker assembly (16) is pivotally mounted in said missile structure (10) about a roll axis (24) and a pitch axis (20) only, said pitch axis being orthogonal to said roll axis (24),
- (b) first and second pick-off means (28, 34) are provided for picking off angles of rotation of said seeker assembly (16) about said roll and pitch axes (24

DECLASS  
By Licensing Review  
**SECRET**

27

A

DECLASS  
By 10/19/88  
**SECRET**

Appln. of Hartmann et al.  
USSN 08/309,343

and 20, respectively), said first and second pick-off means (28,34) providing pick-off signals,

- (c) structure-fixed inertial sensor means (48) are provided for measuring the angular rates about three mutually orthogonal axes and providing angular rate signals,
- (d) said target deviation signals from said seeker assembly (16), said pick-off signals from said pick-off means (28, 34) and said angular rate signals from said inertial sensor means (48) are applied [appied] to a computer (76), which is programmed to define a seeker reference system with three degrees of freedom, said seeker reference system being [- which is] decoupled from movements of the missile and the seeker assembly (16), [- the] having a roll movement [of] which is zero, and [-] which is caused to track a target detected by said seeker assembly (16), and
- (e) said computer (76), in addition, has means (80) for generating positioning commands for said actuator means (36, 38) depending on the position of said seeker reference system.

Claim 3: line 2, delete "the" (first occurrence);  
line 3, delete "the";  
line 4, delete "the";  
line 8, substitute --case-- for "phase";

DECLASS  
By 10/19/88  
**SECRET**